The UNSW Centre for Energy and Environmental Markets (CEEM) undertakes interdisciplinary research in the design, analysis and performance monitoring of energy and environmental markets and their associated policy frameworks. CEEM brings together UNSW researchers from the Australian School of Business, the Faculty of Engineering, the Institute of Environmental Studies, the Faculty of Arts and Social Sciences and the Faculty of Law, working alongside a number of Australian and International partners. CEEM's research focuses on the challenges and opportunities of clean energy transition within market-oriented electricity industries.

Key aspects of this transition are the integration of large-scale renewable technologies yet also, critically, distributed energy technologies – generation, storage and 'smart' loads – into the electricity industry. Facilitating this integration requires appropriate spot, ancillary and forward wholesale electricity markets, retail markets, monopoly network regulation frameworks and broader energy and climate policies. CEEM has been undertaking research into these challenges for more than a decade, with a focus on the design of markets and regulatory frameworks within the Australian National Electricity Market, and State and Federal energy and climate policy. More details of this work can be found at the Centre website – www.ceem.unsw.edu.au.

We welcome comments, suggestions, and corrections on this submission and all our work in the area. Please contact Associate Professor Anna Bruce, Joint Director of the Centre at a.bruce@unsw.edu.au.

Australia's Guarantee of Origin Scheme: consultation on scheme design, emissions accounting and renewable electricity certification

Renewable Electricity Guarantee of Origin (REGO) certification survey

Climate

Response received at:
24 October 2023, 10:09am

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1 Confirm that you have read and understand this privacy notice.
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2 Please indicate how and if you want your submission published.
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3 Published name
UNSW - Collaboration on Energy and Environmental Markets

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Yes

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9 Who are you answering on behalf of?

Organisation

10 Organisation name

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11 What sector best describes you or your organisation?

Academia/consultancy

12 What state or territory do you live in?

New South Wales

13 Postcode

2033

14 What area best describes where you live?

City

15 Your response:

The department proposes that REGOs could be created by any renewable energy generator including legacy hydro and distributed PV. We recognise that the REGO is not intended as a policy support scheme, but rather a certification scheme. As such, we agree that in the long-term, all renewable energy generators should be eligible to create REGOs. Since users of Product GOs and other corporate reporting schemes will need to meet different additionality requirements in their target market(s) or certification framework, it is appropriate that all RE can create REGOs with a broad range of optional certificate attributes.

We are of the view that retaining or even updating the baseline year before which

renewable energy is not eligible to create certificates creates an artificial distinction between 'old' and 'new' renewable energy and note that there are 'above baseline' RE generators that also no longer require policy support . However, we do note that the value ascribed to REGO certificates also represents a windfall financial gain for the previously ineligible generation.

While the REGO certification scheme can facilitate voluntary RE procurement and Scope 2 Emissions accounting, there remains a policy gap to meet the Government's targets. The discussion paper notes that the government's Electricity and Energy Sector decarbonisation plan will "map out pathways to 2050" to meet goals, "attract new investment" and "provide industry and investors with certainty", and that the "REGO scheme will form an important building block" of this plan. It is also likely to be a key mechanism for voluntary procurement.

Without clarity around policy to enact the Electricity and Energy sector decarbonisation plan, we are concerned about the impact on voluntary markets and RE investment of additional below baseline certificates (12-13,000GWh) combined with reduced demand for RE certificates when the retailer RET liability ends in 2030. While business customers may have reporting frameworks or obligations to reduce emissions, residential demand (currently around 25% of total NEM demand) will at this stage not require coverage by REGOs.

More broadly, greenwashing is emerging as a significant issue and the widening of eligibility to create REGOs raises risks of greenwashing, particularly among non-sophisticated consumers who may be unable to differentiate between certificates of different quality – for instance generation sources or certificates with recent vs long past project commissioning dates. We recommend the Government strengthen emissions accounting and labelling to manage these risks. Measures could include limiting Scope 2 accounting in the NGERS procedures to best practice market-based accounting, strengthening the GreenPower labelling framework to include a consumer education campaign, and limiting the use of poor quality offsets such as those created under the ERF to the greatest extent possible.

16 Your response:

We agree with the proposal to allow power stations to assign the right to create certificates to a third party aggregator, which may facilitate the creation of REGOs for small-scale generators for whom transaction costs are otherwise too high.

Under this arrangement, aggregators can (by proxy) create and surrender non-

timestamped REGOs in 1MWh volumes (even if that takes weeks or months). It is not clear in the paper, but we assume this proposal also allows creation or surrender of timestamped REGOs by aggregation of RE generation or consumption from multiple meters in the same timestamp. We assume the motivation for this provision is to facilitate the participation of small-scale generators and consumers.

However, indivisible 1 MWh REGOs as proposed do not allow generators to create timestamped REGOs when they generate less than 1 MW within an hour without the support of an aggregator. While the use of an aggregator may be appropriate for small-scale systems, larger distributed generators (<5MW) are also likely to create a significant fraction of partial REGOs. This may be particularly likely to occur at times when timestamped REGOs are valuable (e.g., for a small PV generator during evenings when REGOs are scarce) , thus placing them at a disadvantage.

This reduced access to time-stamped REGOs places large and small-scale distributed generators at a disadvantage compared to utility-scale generators and perversely disincentivises demand side measures such as load shifting and behind-the-meter batteries.

Also see our response to timestamping below.

17 Your response:

The motivation for storage facilities to be able create REGOs is to time-shift certified renewable generation. To facilitate storage REGOs that track the shifting of time-stamped renewable energy, the surrendered REGOs used to create storage REGOs should be time-matched with consumption by the storage facility.

However, the current proposal seems to be that storage facilities can create timestamped REGOs by surrendering REGOs from renewable energy that may be generated at any time. This could create a situation where the storage facility charges from a non-renewable grid mix, buys cheap REGOs separately that could be from a day or a year ago and does not match the time period of charging, and then proceed to sell this as a time-matched REGO. Storage facilities may then create time-stamped REGOs that do not physically match their renewable energy procurement, for instance, by charging and discharging multiple times during a period of high timestamped REGO process using fossil fuels and non-timestamped REGOs. More generally, converting a REGO without a timestamp to a timestamped REGO falsely claims provenance for the electricity discharged from the battery.

18 Your response:

We welcome the change in the department's proposal to quarantine 'below baseline' REGOs until 2030, which would avoid a sudden influx of REGOs in parallel to the RET.

We agree with restricted banking provisions. 18 months seems to be a reasonable timeframe - sufficient time to smooth supply and price fluctuations while reducing the risk of banking resulting in oversupply and price collapse.

However, without a clearly defined policy instrument, the proposed 'transitional' arrangements until 2030 for below baseline REGOs raise concerns around EITEs greenwashing. ETIEs currently have no liability under the Renewable Energy Target scheme for eligible emissions-intensive trade-exposed activities and hence their ability to use REGOs would not directly decrease demand for LGCs. However, ETIEs are subject to reporting requirements and decreasing Safeguard Mechanism baselines (which collectively cover about half of Australia's emissions and are aligned with emissions targets of 43% below 2005 levels by 2030 and net zero by 2050).

Changes to NGERS introduced earlier this year facilitate optional market-based reporting, and the direct use of renewable energy certificates for Scope 2 NGERS reporting and Safeguard Mechanism compliance, providing demand for RE certificates which could drive new RE investment. But allowing ETIEs and Product GOs to retire REGOs from old hydro would make available an additional 12-13,000GWh of renewable energy certificates at low cost (likely comparable to ACCUs@$30 x average NEM emissions 0.6 = $18) since other buyers for these certificates would be limited (i.e., only early adopters of Product GOs). For ETIEs, these below-baseline certificates will be an attractive alternative, given the reputational risks relating to widespread public concerns about the integrity of ACCUs.

This would result in no additional RE generation or emissions reductions and would both undermine emissions reductions that might be achieved through the tightening of Safeguard baselines and allow ETIEs to continue to avoid paying fairly for their share of Australia's electricity industry transition. ETIEs have historically contributed nothing to RET investment to date (being exempt) but have claimed decreasing Scope 2 emissions due to decreasing emission intensity largely achieved by the RET, paid for by other electricity consumers. The proposal to allow ETIEs privileged access to low-cost certificates, while other customers are obliged to buy higher-priced above-baseline REGOs or LGCs, is likely to exacerbate this inequity.

19 Your response:

Not answered

20 Your response:

We support the inclusion of timestamping as a certificate attribute, which is aligned with the shift towards more granular locational and temporal reporting requirements in various jurisdictions around the world.

It is proposed that timestamping will only be done in whole megawatt hours (1MWh within an hour) upon the commencement of the scheme, while residual renewable energy can be aggregated and be eligible for non-timestamped REGOs (which can be sold to buyers without temporal requirements). We are concerned that consumers wanting to time-match RE to their demand would similarly not be able to 100% time-match their demand without either over purchasing REGOs or using an aggregator to meet their demand with time-stamped REGOs. This would increase the complexity of PPAs with '24/7' time-matched renewable energy clauses and present challenges to meeting timestamping targets whether bundled with a PPA or separately, which may require:

- Over-purchasing of 1MWh REGOs to ensure the % matching target is met;
- the use of a large aggregator or retailer that can supply the required REGOs, reducing the ability of consumers to buy timestamped RE directly from RE generators, increasing the market dominance of retailers and generators with large portfolios; and/or
- a trading platform for timestamped REGOs to purchase required REGOs in specific time periods, a proposal which has raised concerns from stakeholders including under the previous consultation around complexity, transaction costs and lack of liquidity/ participants for effective market functioning.

We also agree that NGERS accounting should require market-based Scope 2 emission accounting as it would reduce freeriding and require all organisations/facilities to take responsibility for actually meeting their portion of targets / requirements under the Safeguard Mechanism or other reporting frameworks.

21 Your response:

We contend that it would be better to publish emissions data per region and per time period (e.g. 5 minutes) separately from REGOs (e.g. via AEMO's NEMWeb platform with documented assumptions) so that the appropriate emissions accounting for a specific purpose can be used and the potential for misinterpretation minimised. While it is argued that emissions intensity at a temporally granular scale is irrelevant since emissions from electricity generation are determined by long term investment cycles i.e., generator

investment and retirement, we believe there is a role for emissions tracking to motivate operational as well as investment decision making.

If 5 min emissions intensity and marginal emissions are published (noting that agreement would need to be reached on how marginal emissions should be calculated), timestamped certificates would facilitate the calculation of emissions for a range of purposes. E.g:
- Emissions intensity of an activity (using average emissions intensity in each 5 min period)
- Emissions avoided/incurred per MWh by reducing/increasing demand (using marginal emissions intensity)
- Emissions impact of investments (using projected annual average emissions intensity changes)

22 Have you removed any identifying information from your submission?

Not answered

23 Upload a submission

Not answered

24 Upload a supporting document

The UNSW Centre for Energy and Environmental Markets.725594b1eea28.pdf